Exhibit B

Exhibit B – U.S. Patent No. 9,271,266

Toyota makes, uses, tests, offers for sale, sells, and/or imports vehicles that comply, operate in accordance, and/or are configured in accordance with 36 Series of one or more of 3GPP releases 8-16. Such vehicles are collectively referred to as the "Accused Products." The Accused Products include Toyota and Lexus-branded vehicles that support LTE and that were made in, used in, tested in, offered for sale in, sold in, or imported into the United States by Toyota at some point in time since 2018. Each of the Accused Products supports LTE and, thus, includes the features and functionality identified in this chart. The features and functionality identified in this chart cause the Accused Products to practice the asserted claims of U.S. Patent No. 9,271,266 (the "'266 patent").

Claim 1	Accused Products
[PRE] A method of operating a user equipment, the method comprising:	An Accused Product is a user equipment (UE). As evidenced below, the Accused Products perform a method of operating a user equipment when operating on an LTE network.
[A] receiving a wireless signal at the user equipment, the wireless signal comprising a control channel for the user equipment, the control channel being in at least one control channel element (CCE), the control channel comprising an indication of an uplink communication resource useable by the user equipment for uplink communication;	As evidenced below, an Accused Product operating on an LTE network receives a wireless signal at the user equipment, the wireless signal comprising a control channel for the user equipment, the control channel being in at least one control channel element (CCE), the control channel comprising an indication of an uplink communication resource useable by the user equipment for uplink communication.

Claim 1	Accused Products

9 Physical downlink control channel procedures

9.1 UE procedure for determining physical downlink control channel assignment

9.1.1 PDCCH Assignment Procedure

The control region consists of a set of CCEs, numbered from 0 to $N_{CCE,k}-1$ according to Section 6.8.2 in [3], where $N_{CCE,k}$ is the total number of CCEs in the control region of subframe k. The UE shall monitor a set of PDCCH candidates for control information in every non-DRX subframe, where monitoring implies attempting to decode each of the PDCCHs in the set according to all the monitored DCI formats.

The set of PDCCH candidates to monitor are defined in terms of search spaces, where a search space $S_k^{(L)}$ at aggregation level $L \in \{1,2,4,8\}$ is defined by a set of PDCCH candidates. The CCEs corresponding to PDCCH candidate m of the search space $S_k^{(L)}$ are given by

$$L \cdot \{(Y_k + m) \bmod \lfloor N_{CCE,k}/L \rfloor\} + i$$

where Y_k is defined below, $i = 0,\cdots,L-1$ and $m = 0,\cdots,M^{(L)}-1$. $M^{(L)}$ is the number of PDCCH candidates to monitor in the given search space.

The UE shall monitor one common search space at each of the aggregation levels 4 and 8 and one UE-specific search space at each of the aggregation levels 1, 2, 4, 8. The common and UE-specific search spaces may overlap.

The aggregation levels defining the search spaces are listed in Table 9.1.1-1. The DCI formats that the UE shall monitor depend on the configured transmission mode as defined in Section 7.1.

Source: TS 36.213,[1] p. 64

[1] 3GPP TS 36.213 V8.8.0 (2009-09) Evolved Universal Terrestrial Radio Access (E-UTRA); Physical layer procedures (Release 8)

Claim 1	Accused Products

6.8 Physical downlink control channel

6.8.1 PDCCH formats

The physical downlink control channel carries scheduling assignments and other control information. A physical control channel is transmitted on an aggregation of one or several consecutive control channel elements (CCEs), where a control channel element corresponds to 9 resource element groups. The number of resource-element groups not assigned to PCFICH or PHICH is N_{REG}. The CCEs available in the system are numbered from 0 and $N_{CCE}-1$, where $N_{CCE}=\lfloor N_{REG}/9 \rfloor$. The PDCCH supports multiple formats as listed in Table 6.8.1-1. A PDCCH consisting of n consecutive CCEs may only start on a CCE fulfilling $i \bmod n = 0$, where i is the CCE number.

Multiple PDCCHs can be transmitted in a subframe.

Table 6.8.1-1: Supported PDCCH formats

PDCCH format	Number of CCEs	Number of resource-element groups	Number of PDCCH bits
0	1	9	72
1	2	18	144
2	4	36	288
3	8	72	576

Source: TS 36.211,[2] p. 58

[2] 3GPP TS 36.211 V8.9.0 (2009-12) Evolved Universal Terrestrial Radio Access (E-UTRA); Physical Channels and Modulation (Release 8)

Claim 1	Accused Products

6.8 Physical downlink control channel

6.8.1 PDCCH formats

The physical downlink control channel carries scheduling assignments and other control information. A physical control channel is transmitted on an aggregation of one or several consecutive control channel elements (CCEs), where a control channel element corresponds to 9 resource element groups. The number of resource-element groups not assigned to PCFICH or PHICH is N_{REG}. The CCEs available in the system are numbered from 0 and $N_{CCE}-1$, where $N_{CCE}=\lfloor N_{REG}/9 \rfloor$. The PDCCH supports multiple formats as listed in Table 6.8.1-1. A PDCCH consisting of n consecutive CCEs may only start on a CCE fulfilling $i \bmod n = 0$, where i is the CCE number.

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3	8	72	576

Source: TS 36.211, p. 58

8.1 Resource Allocation for PDCCH DCI Format 0

The resource allocation information indicates to a scheduled UE a set of contiguously allocated virtual resource block indices denoted by n_{VRB}. A resource allocation field in the scheduling grant consists of a resource indication value (RIV) corresponding to a starting resource block (RB_{START}) and a length in terms of contiguously allocated resource blocks ($L_{CRBs} \geq 1$). The resource indication value is defined by

if $(L_{CRBs}-1) \leq \lfloor N_{RB}^{UL}/2 \rfloor$ then

$$RIV = N_{RB}^{UL}(L_{CRBs}-1)+RB_{START}$$

else

$$RIV = N_{RB}^{UL}(N_{RB}^{UL}-L_{CRBs}+1)+(N_{RB}^{UL}-1-RB_{START})$$

Claim 1	Accused Products
	Source: TS 36.213, p. 55
[B][1] searching for the control channel in the at least one CCE from a plurality of candidate CCEs, the plurality of candidate CCEs being in a plurality of aggregation levels, each of the plurality of aggregation levels comprising a respective limited number of candidate control channels, and	As evidenced below, an Accused Product operating on an LTE network searches for the control channel in the at least one CCE from a plurality of candidate CCEs, the plurality of candidate CCEs being in a plurality of aggregation levels, each of the plurality of aggregation levels comprising a respective limited number of candidate control channels.

Claim 1	Accused Products
	9.1 UE procedure for determining physical downlink control channel assignment 9.1.1 PDCCH Assignment Procedure The control region consists of a set of CCEs, numbered from 0 to $N_{CCE,k}-1$ according to Section 6.8.2 in [3], where $N_{CCE,k}$ is the total number of CCEs in the control region of subframe k. The UE shall monitor a set of PDCCH candidates for control information in every non-DRX subframe, where monitoring implies attempting to decode each of the PDCCHs in the set according to all the monitored DCI formats. The set of PDCCH candidates to monitor are defined in terms of search spaces, where a search space $S_k^{(L)}$ at aggregation level $L \in \{1,2,4,8\}$ is defined by a set of PDCCH candidates. The CCEs corresponding to PDCCH candidate m of the search space $S_k^{(L)}$ are given by $$L \cdot \left\{ (Y_k + m) \bmod \left\lfloor N_{CCE,k} / L \right\rfloor \right\} + i$$ where Y_k is defined below, $i = 0, \cdots, L-1$ and $m = 0, \cdots, M^{(L)}-1$. $M^{(L)}$ is the number of PDCCH candidates to monitor in the given search space. The UE shall monitor one common search space at each of the aggregation levels 4 and 8 and one UE-specific search space at each of the aggregation levels 1, 2, 4, 8. The common and UE-specific search spaces may overlap. The aggregation levels defining the search spaces are listed in Table 9.1.1-1. The DCI formats that the UE shall monitor depend on the configured transmission mode as defined in Section 7.1. **Table 9.1.1-1: PDCCH candidates monitored by a UE.** Search space $S_k^{(L)}$ Type / Aggregation level L / Size [in CCEs] / Number of PDCCH candidates $M^{(L)}$ UE-specific: 1 / 6 / 6 UE-specific: 2 / 12 / 6 UE-specific: 4 / 8 / 2 UE-specific: 8 / 16 / 2 Common: 4 / 16 / 4 Common: 8 / 16 / 2 **Source:** TS 36.213, pp. 64-65
[B][2] the searching includes searching at least one of the	The searching includes searching at least one of the respective limited number of candidate control channels in at least one of the plurality of aggregation levels.

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Claim 1	Accused Products
respective limited number of candidate control channels in at least one of the plurality of aggregation levels; and	9.1 UE procedure for determining physical downlink control channel assignment 9.1.1 PDCCH Assignment Procedure The control region consists of a set of CCEs, numbered from 0 to $N_{CCE,k}-1$ according to Section 6.8.2 in [3], where $N_{CCE,k}$ is the total number of CCEs in the control region of subframe k. The UE shall monitor a set of PDCCH candidates for control information in every non-DRX subframe, where monitoring implies attempting to decode each of the PDCCHs in the set according to all the monitored DCI formats. The set of PDCCH candidates to monitor are defined in terms of search spaces, where a search space $S_k^{(L)}$ at aggregation level $L \in \{1,2,4,8\}$ is defined by a set of PDCCH candidates. The CCEs corresponding to PDCCH candidate m of the search space $S_k^{(L)}$ are given by $L \cdot \{(Y_k + m) \bmod \lfloor N_{CCE,k} / L \rfloor\} + i$ where Y_k is defined below, $i = 0,\cdots,L-1$ and $m = 0,\cdots,M^{(L)}-1$. $M^{(L)}$ is the number of PDCCH candidates to monitor in the given search space. The UE shall monitor one common search space at each of the aggregation levels 4 and 8 and one UE-specific search space at each of the aggregation levels 1, 2, 4, 8. The common and UE-specific search spaces may overlap. The aggregation levels defining the search spaces are listed in Table 9.1.1-1. The DCI formats that the UE shall monitor depend on the configured transmission mode as defined in Section 7.1. **Table 9.1.1-1: PDCCH candidates monitored by a UE.** Search space $S_k^{(L)}$ / Type / Aggregation level L / Size [in CCEs] / Number of PDCCH candidates $M^{(L)}$ UE-specific: 1 / 6 / 6; 2 / 12 / 6; 4 / 8 / 2; 8 / 16 / 2 Common: 4 / 16 / 4; 8 / 16 / 2 **Source:** TS 36.213, pp. 64-65

<table>
<tr><th>Claim 1</th><th>Accused Products</th></tr>
<tr><td>[C][1] transmitting an uplink data signal according to the uplink communication resource,</td><td>As evidenced below, an Accused Product operating on an LTE network transmits an uplink data signal according to the uplink communication resource.

11.1.2 Uplink Scheduling
In the uplink, E-UTRAN can dynamically allocate resources (PRBs and MCS) to UEs at each TTI via the C-RNTI on PDCCH(s). A UE always monitors the PDCCH(s) in order to find possible allocation for uplink transmission when its downlink reception is enabled (activity governed by DRX when configured).

Source: TS 36.300,[3] p. 67</td></tr>
<tr><td>[C][2] the indication of the uplink communication resource decoded from the control channel of the wireless signal according to the plurality of candidate CCEs using an identifier associated with the user equipment.</td><td>The indication of the uplink communication resource is decoded from the control channel of the wireless signal according to the plurality of candidate CCEs using an identifier associated with the user equipment.

8 Physical uplink shared channel related procedures
[…]
If a UE is configured by higher layers to decode PDCCHs with the CRC scrambled by the C-RNTI, the UE shall decode the PDCCH according to the combination defined in table 8-3 and transmit the corresponding PUSCH. The scrambling initialization of this PUSCH corresponding to these PDCCHs and the PUSCH retransmission for the same transport block is by C-RNTI.

Table 8-3: PDCCH configured by C-RNTI
<table><tr><th>DCI format</th><th>Search Space</th></tr><tr><td>DCI format 0</td><td>Common and
UE specific by C-RNTI</td></tr></table>
Source: TS 36.213, pp. 52-54</td></tr>
</table>

[3] 3GPP TS 36.300 V8.12.0 (2010-03) Evolved Universal Terrestrial Radio Access (E-UTRA) and Evolved Universal Terrestrial Radio Access Network (E-UTRAN); Overall description; Stage 2 (Release 8)

Claim 1	Accused Products

Claim 2	Accused Products
The method of claim 1, wherein at a first aggregation level the control channel is in one CCE and wherein at a second aggregation level the control channel is in two consecutive CCEs.	As evidenced below, at a first aggregation level the control channel is in one CCE and wherein at a second aggregation level the control channel is in two consecutive CCEs.

6.8 Physical downlink control channel

6.8.1 PDCCH formats

The physical downlink control channel carries scheduling assignments and other control information. A physical control channel is transmitted on an aggregation of one or several consecutive control channel elements (CCEs), where a control channel element corresponds to 9 resource element groups. The number of resource-element groups not assigned to PCFICH or PHICH is N_{REG}. The CCEs available in the system are numbered from 0 and $N_{CCE}-1$, where $N_{CCE}=\lfloor N_{REG}/9 \rfloor$. The PDCCH supports multiple formats as listed in Table 6.8.1-1. A PDCCH consisting of n consecutive CCEs may only start on a CCE fulfilling $i \bmod n = 0$, where i is the CCE number.

Multiple PDCCHs can be transmitted in a subframe.

Table 6.8.1-1: Supported PDCCH formats

PDCCH format	Number of CCEs	Number of resource-element groups	Number of PDCCH bits
0	1	9	72
1	2	18	144
2	4	36	288
3	8	72	576

Source: TS 36.211, p. 58

Claim 3	Accused Products
The method of claim 2, wherein at a third aggregation level the control channel is in four consecutive CCEs and wherein at a fourth aggregation level the control channel is in eight consecutive CCEs.	As evidenced below, at a third aggregation level the control channel is in four consecutive CCEs and wherein at a fourth aggregation level the control channel is in eight consecutive CCEs. 6.8 Physical downlink control channel 6.8.1 PDCCH formats The physical downlink control channel carries scheduling assignments and other control information. A physical control channel is transmitted on an aggregation of one or several consecutive control channel elements (CCEs), where a control channel element corresponds to 9 resource element groups. The number of resource-element groups not assigned to PCFICH or PHICH is N_{REG}. The CCEs available in the system are numbered from 0 and $N_{CCE}-1$, where $N_{CCE}=\lfloor N_{REG}/9 \rfloor$. The PDCCH supports multiple formats as listed in Table 6.8.1-1. A PDCCH consisting of n consecutive CCEs may only start on a CCE fulfilling $i \bmod n = 0$, where i is the CCE number. Multiple PDCCHs can be transmitted in a subframe. **Table 6.8.1-1: Supported PDCCH formats** PDCCH format / Number of CCEs / Number of resource-element groups / Number of PDCCH bits 0 / 1 / 9 / 72 1 / 2 / 18 / 144 2 / 4 / 36 / 288 3 / 8 / 72 / 576 **Source:** TS 36.211, p. 58

Claim 4	Accused Products
The method of claim 1, wherein the searching further comprises: decoding the plurality of candidate CCEs using the identifier associated	As evidenced below, an Accused Product operating on an LTE network decodes the plurality of candidate CCEs using the identifier associated with the user equipment to determine the uplink communication resource.

Claim 4	Accused Products
with the user equipment to determine the uplink communication resource.	**Table 9.1.1-1: PDCCH candidates monitored by a UE.** Search space $S_k^{(L)}$ Type / Aggregation level L / Size [in CCEs] / Number of PDCCH candidates $M^{(L)}$ UE-specific: 1 / 6 / 6; 2 / 12 / 6; 4 / 8 / 2; 8 / 16 / 2 Common: 4 / 16 / 4; 8 / 16 / 2 **Source:** TS 36.213, p. 65 8 Physical uplink shared channel related procedures […] If a UE is configured by higher layers to decode PDCCHs with the CRC scrambled by the C-RNTI, the UE shall decode the PDCCH according to the combination defined in table 8-3 and transmit the corresponding PUSCH. The scrambling initialization of this PUSCH corresponding to these PDCCHs and the PUSCH retransmission for the same transport block is by C-RNTI. **Table 8-3: PDCCH configured by C-RNTI** DCI format: DCI format 0 — Search Space: Common and UE specific by C-RNTI **Source:** TS 36.213, pp. 52-54

Claim 5	Accused Products
[PRE] A user equipment comprising:	An Accused Product is a user equipment (UE).

Claim 5	Accused Products
[A] a receiver operable to receive a wireless signal at the user equipment, the wireless signal comprising a control channel for the user equipment, the control channel being in at least one control channel element (CCE), wherein the control channel comprises an indication of an uplink communication resource useable by the user equipment for uplink communication;	The Accused Products include hardware and software for receiving wireless signaling when communicating using LTE (i.e., a receiver operable to receive a wireless signal at the user equipment). As evidenced above, Accused Products include a receiver operable to receive a wireless signal at the user equipment, the wireless signal comprising a control channel for the user equipment, the control channel being in at least one control channel element (CCE), wherein the control channel comprises an indication of an uplink communication resource useable by the user equipment for uplink communication. *See* Claim 1, [A].
[B][1] a processor operable to search for the control channel in the at least one CCE from a plurality of candidate CCEs, the plurality of candidate CCEs being in a plurality of aggregation levels, each of the plurality of aggregation levels comprising a respective limited number of candidate control channels, and	The Accused Products include one or more processors (e.g., processor(s) in a telematics unit, processor(s) in a data communications module) configured to implement and/or support LTE communications. As evidenced above, the one or more processors are operable to search for the control channel in the at least one CCE from a plurality of candidate CCEs, the plurality of candidate CCEs being in a plurality of aggregation levels, each of the plurality of aggregation levels comprising a respective limited number of candidate control channels. *See* Claim 1, [B][1].
[B][2] the searching includes searching at least one of the respective limited number of candidate control channels in at least one of the plurality of aggregation levels; and	As evidenced above, the searching includes searching at least one of the respective limited number of candidate control channels in at least one of the plurality of aggregation levels. *See* Claim 1, [B][2].
[C][1] a transmitter operable to transmit an uplink data signal according to the uplink communication resource,	The Accused Products include hardware and software for transmitting an uplink data signal when communicating using LTE (i.e., a transmitter operable to transmit an uplink data signal). As evidenced above, the hardware and software for transmitting an uplink data signal is operable to transmit an uplink data signal according to the uplink communication resource. *See* Claim 1, [C][1].

Claim 5	Accused Products
[C][2] the indication of the uplink communication resource decoded from the control channel of the wireless signal according to the plurality of candidate CCEs using an identifier associated with the user equipment.	As evidenced above, the indication of the uplink communication resource is decoded from the control channel of the wireless signal according to the plurality of candidate CCEs using an identifier associated with the user equipment. *See* Claim 1, [C][2].

Claim 6	Accused Products
The user equipment of claim 5, wherein at a first aggregation level the control channel is in one CCE and wherein at a second aggregation level the control channel is in two consecutive CCEs.	As evidenced above, at a first aggregation level the control channel is in one CCE and wherein at a second aggregation level the control channel is in two consecutive CCEs. *See* Claim 2.

Claim 7	Accused Products
The user equipment of claim 6, wherein at a third aggregation level the control channel is in four consecutive CCEs and wherein at a fourth aggregation level the control channel is in eight consecutive CCEs.	As evidenced above, at a third aggregation level the control channel is in four consecutive CCEs and wherein at a fourth aggregation level the control channel is in eight consecutive CCEs.

Claim 8	Accused Products
The user equipment of claim 5, wherein the processor is further operable: to decode the plurality of candidate CCEs using the identifier associated with the user equipment to determine the uplink communication resource.	As evidenced above, the one or more processors is further operable to decode the plurality of candidate CCEs using the identifier associated with the user equipment to determine the uplink communication resource. *See* Claim 4.

Claim 9	Accused Products
[PRE] A non-transitory computer readable storage medium storing a set of instructions for execution by a user equipment, the set of instructions comprising:	Each Accused Product includes one or more processors (e.g., processor(s) in a telematics unit, processor(s) in a data communications module) configured to implement and/or support LTE communications. These processors implement instructions stored as software/code in memory included in the Accused Product (i.e., a non-transitory computer readable storage medium storing a set of instructions for execution by a user equipment).
[A] a receiving code segment for receiving a wireless signal at the user equipment, the wireless signal comprising a control channel for the user equipment, the control channel being in at least one control channel element (CCE), the control channel comprising an indication of an uplink communication resource useable by the user equipment for uplink communication;	As evidenced above, the instructions include software/code that when implemented cause the UE to receive a wireless signal at the user equipment, the wireless signal comprising a control channel for the user equipment, the control channel being in at least one control channel element (CCE), the control channel comprising an indication of an uplink communication resource useable by the user equipment for uplink communication. *See* Claim 1, [A].
[B][1] a searching code segment for searching for the control channel in	As evidenced above, the instructions include software/code that when implemented cause the UE to search for the control channel in the at least one CCE from a plurality of candidate

Claim 9	Accused Products
the at least one CCE from a plurality of candidate CCEs, the plurality of candidate CCEs being in a plurality of aggregation levels, each of the plurality of aggregation levels comprising a respective limited number of candidate control channels, and	CCEs, the plurality of candidate CCEs being in a plurality of aggregation levels, each of the plurality of aggregation levels comprising a respective limited number of candidate control channels. *See* Claim 1, [B][1].
[B][2] the searching includes searching at least one of the respective limited number of candidate control channels in at least one of the plurality of aggregation levels; and	As evidenced above, the searching includes searching at least one of the respective limited number of candidate control channels in at least one of the plurality of aggregation levels. *See* Claim 1, [B][2].
[C][1] a transmitting code segment for transmitting an uplink data signal according to the uplink communication resource,	As evidenced above, the instructions include software/code that when implemented cause the UE to transmit an uplink data signal according to the uplink communication resource. *See* Claim 1, [C][1].
[C][2] the indication of the uplink communication resource decoded from the control channel of the wireless signal according to the plurality of candidate CCEs using an identifier associated with the user equipment.	As evidenced above, the indication of the uplink communication resource is decoded from the control channel of the wireless signal according to the plurality of candidate CCEs using an identifier associated with the user equipment. *See* Claim 1, [C][2].

Claim 10	Accused Products
The non-transitory computer readable medium of claim 9, wherein at a first aggregation level	As evidenced above, at a first aggregation level the control channel is in one CCE and wherein at a second aggregation level the control channel is in two consecutive CCEs. *See* Claim 2.

Claim 10	Accused Products
the control channel is in one CCE and wherein at a second aggregation level the control channel is in two consecutive CCEs.	

Claim 11	Accused Products
The non-transitory computer readable medium of claim 10, wherein at a third aggregation level the control channel is in four consecutive CCEs and wherein at a fourth aggregation level the control channel is in eight consecutive CCEs.	As evidenced above, at a third aggregation level the control channel is in four consecutive CCEs and wherein at a fourth aggregation level the control channel is in eight consecutive CCEs. *See* Claim 3.

Claim 12	Accused Products
The non-transitory computer readable medium of claim 9, wherein the searching code segment includes instructions for decoding the plurality of candidate CCEs using the identifier associated with the user equipment to determine the uplink communication resource.	As evidenced above, the instructions that when implemented cause the UE to search for the control channel include instructions for decoding the plurality of candidate CCEs using the identifier associated with the user equipment to determine the uplink communication resource. *See* Claim 4.